2.1 The preparatory phase of the programme will provide for the following lines of action:

2.1.1 Initial surveying of the drought stricken areas in order to:

a) identify the areas where urgent action is required;

b) collect information about the affected communities in terms of location, accessibility, population and groundwater potential, as well as their roles as trading and communication centres;

c) assess the attitude of the local officials and community leaders to the idea of contributing to the construction and maintenance of water supply facilities;

d) assess the incidence of water-borne diseases and the need for health and nutrition education and other services;

e) investigate the possibilities for increased local production of nutritious foods through micro irrigation, using waste or surplus water.

2.1.2 Area water supply plans with detailed maps will be developed for each area where water is a major problem. This will be done by the Planning and Design Section of the Public Health Engineering Department.

2.1.3 The Department of Public Health Engineering will be fully staffed, and field personnel will be appointed and trained.

2.1.4 Existing field staff such as sanitarians and technicians will receive in-service orientation training.

2.1.5 The project unit of the Ground Water Department will be fully developed and preparatory hydrological surveys will be initiated.

.../

2.2 The first operational phase of the programme will, on the basis of the survey reports and the subsequent area plans take the form of an emergency crash programme. Emphasis will be placed on exploitation of ground water within reach by economic means. The approach will be the following:

2.2.1 Existing dry wells which can be worked by hand tools will be deepened by augers and other means, protected by a suitable form of casing and a cover and furnished with hand pumps.

2.2.2 Existing dry wells which cannot be deepened without mechanical means will be deepened by drilling or blasting and furnished with casing and suitable pumps. If required reservoirs fitted with taps will be built near the wells.

2.2.3 New wells will be dug and lined or drilled as conditions allow, suitable pumps installed, and where necessary a reservoir with taps will be built.

2.2.4 In problem areas located through the shallow well programme or hydrological surveys, deep tube wells will be drilled, suitable pumps installed, and distribution systems constructed by the PHED.

...]

2.3 <u>The second operational phase</u> of the programme will follow the pattern of work described under 2.2, but it will be implemented with wider scope and with stronger emphasis on sanitary standards, thus taking the form of a pilot operation for a long-term community water supply programme. While continuing the first phase type of operations, certain aspects of the project will receive further attention along the following lines:

2.3.1 The feasibility of further development of the water supply schemes provided during the first phase will be studied and the possibilities for expanding efforts to protect and utilize other water resources such as springs, karezes, streams etc. will be investigated.

2.3.2 The need for sociological studies in depth as related to health education in general and community motivation in particular in order to stimulate increased interest and co-operation on which proper operation and maintenance of water supply systems and the success of other environmental health activities depend.

2.4 <u>Training of Personnel</u> will take orientation course for Sanitarians at the very start in the form of initial in-service training for all essential categories of field staff, and yearly review seminars for key personnel. Selected staff members from all the sections of the PHE Department and from the motivation unit will be assigned to contributory participation in the training programme.

...]

2.4.1 Orientation training of key personnel will include the 4 supervising engineers and the 12 provincial sanitarians. An initial six week course will be organized, including 2 weeks in the Public Health Institute which study tours to the Shewaki demonstration area. Particular time of training for the duration of not less than three weeks should be devoted to: Well digging and lining, pump installation and maintenance, pipe fittings and all other mechanical aspects connected with water supplies.

3.2 Orientation training of the sanitarians at woleswali level, 12 in each zone, and the mechanics and masons of the provincial units will be conducted by the supervising engineer assisted by the provincial sanitarians at the zonal base. These courses will include field work on water schemes typical of the prevailing conditions in the respective zones.

3.3 Initial training of the zonal drilling and construction crews will take place in the provinces at Nangarhar and Kunduz, and it will concentrate on practical field work, including maintenance of pumps and equipment.

3.4 Training of the deep well drilling crews of the Ground Water department will not require special courses as the key members of the crews will be experienced drillers who will train the untrained members while they work.

...]

3.5 Refresher training of the field personnel of the Public Health Engineering Department will be arranged as follows:

3.5.1 For the groups having received the orientation training described in paragraph 2.4.1 above, refresher training will be conducted as yearly seminars of two weeks duration. Emphasis will be placed on exchange of experience and analysis of problems encountered.

3.5.2 For the groups having received the orientation training as described in paragraph 2.4.2 above, refresher training will be conducted at zonal level, and take the form of a practical review of the methods of work in the light of progress made.

3.5.3 For the groups having received the orientation training described in paragraph 2.4.2 will, during the slack seasons, three winter months in the North and three summer months in the Southern parts of the country, receive refresher training by participation in the yearly inspection and overhaul of their equipment and transport as well as taking part in other work of TEMO as a practical part of special in-service courses.

...]

TIME SCHEDULE

From: APRIL To: End JUNE 1973

To conduct extensive preliminary surveys in the most stricken drought areas; to establish a central office; warehouse and small workshop in Kabul.

From: JULY To: End SEPTEMBER 1973

In continuation with the extensive preliminary surveys, establish Zonal Centres so as to equip and put into operation well digging and pump installation teams; training of local personnel for proper maintenance of pumps.

From: OCTOBER 1973 To: End MARCH 1974

With the gradual arrival of the project transport, material and equipment, to send additional teams for more preliminary surveys as well as Hydrogeological teams for deep borehole locations. Digging, deepening and pump installation to be increased by recruiting more personnel equipped with the newly arrived tools. Rigs of the Ground Water Division of the Ministry of Agriculture for which UNICEF has procured spare parts, to be drilling in the first selected places.

.../

<u>From: APRIL 1974</u>   <u>To: End MARCH 1976</u>

With the total arrival of the transport, material and equipment of the Project, survey teams now spread in all the 12 provinces, as well as the Hydrogeological survey teams. Not less than ten teams for each Zone of well digging and hand pump installations to be in full operation, fully equipped. Other teams for deep well pump installation to be also in operation, drilling rigs of the project now joined to the rigs of the GWD for deep well drilling in full operation. Continuous and extensive training of newly locally recruited personnel to be carried out indefinitely, in particular for maintenance of the pumps already in operation.

<u>EVALUATION</u>

The Government will, with the participation of the relevant UN experts of Water Management Department, UNICEF, and WHO undertake annual evaluation of the project activities which will be assessed in relation to the targets set in this Plan of Operations. The reporting system will be designed in such a way that it provides a basis for continuing evaluation of progress.

...]

PART VI

Administration and Assignment of Responsibilities

1. The project will be conducted under the responsibility of the Government with the technical assistance of WHO concerning the sanitary engineering aspects of the project, and technical assistance of UNICEF concerning the engineering and operational aspects of the project related to well development. In addition, UNICEF will provide material assistance as outlined in Part VII below.

2. The Ministry of Public Health will have overall responsibility for the project which it will implement in close collaboration with the Ministry of Agriculture and Irrigation according to the inter-ministerial Protocol, signed on 29 February 1972 (10.12.1350).

3. At the departmental level the Environmental Health Department will be responsible for the aspects of the project related to shallow wells and all water distribution systems, and the Ground Water Division of the Irrigation Department will be responsible for the aspects of the project related to deep wells.

...]

PART VII

Commitments of UNICEF

1. UNICEF will provide equipment, supplies and cash grants for the period Mid-1972 to March 1976 to an estimated value of US $1.35 million including freight. Besides, UNICEF will endeavour to obtain special contribution from an interested country, in order to cover possible expansion of the project operations.

2. Assistance will take the following general form:

   2.1 1 cable percussion rig for deep well drilling.

   2.2 4 light percussion rig for deepening existing dry wells and non shallow wells.

   2.3 4 compressors with accessories, augars and tools for well digging and developing.

   2.4 Transport for drilling units, construction units, provincial units surveying and supervision.

   2.5 Spare parts and drilling tools for equipment including reconditioning of one available rig, and transport.

   2.6 Equipment and machinery for maintenance and repair of drilling equipment.

   2.7 Casing, and screen, hand operated and spindle turbine pumps and fittings and piping.

   2.8 Equipment for surveying and supplies for design office, analysis kits, and radio communication sets.

   2.9 Training grants and incentives for field staff.

   2.10 Salary for technical and management personnel.

...]

PART VIII

Commitments of WHO

The WHO Sanitary Engineer and other environmental health staff assigned to the Ministry of Public Health, Environmental Health Department (Afghanistan 3001), will provide such technical advice and guidance as may be required for the successful execution of the project.

PART IX

Government Commitments

1. The Government will provide all personnel, materials, supplies, equipment and local expenses necessary for the project, except as provided in PART VII including the following:

1.1 Personnel Annex I.

1.2 The Government will ensure the availability of national opposite numbers for international advisers and technicians throughout the operations of the project including provision of suitable replacements during the long absence of the national opposite numbers.

1.3 Premises

The Government will provide suitable premises for the operation of the project in Kabul, in the Zonal centres and in all other places where there is expansion.

1.4 Supplies and Equipment

Except as provided by WHO and UNICEF necessary for the successful execution of the project.

...]

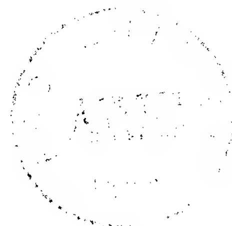
PLAN OF OPERATIONS FOR A RURAL WATER SUPPLY PROJECT IN AFGHANISTAN

The Government of the Republic of Afghanistan, hereinafter referred to as "the Government", the World Health Organisation, hereinafter referred to as "WHO", and the United Nations Children's Fund, hereinafter referred to as "UNICEF".

Being desirous of obtaining mutual agreement concerning the development of a rural water supply project in Afghanistan, particularly with reference to the purposes of the project and the responsibilities which shall be assumed by each of the parties.

Declaring that these responsibilities, will be fulfilled in a spirit of friendly co-operation.

HAVE AGREED AS FOLLOWS:



PART I

Basis of Relationships

The Basic Agreement concluded between the Government and WHO on 24 January 1959, and the Basic Agreement concluded between the Government and UNICEF on 22 October 1970, provide the basis for relationships between the Government and the co-operating agencies in this project and the articles of this Plan of Operations are to be interpreted in the light of the respective basic agreements.

2. The Government will also provide the following:

2.1 Storage and internal transportation of UNICEF supplies and equipment.

2.2 Necessary telephone, telegraph and postal communications.

2.3 Fuel, maintenance, spare parts and such registration of related charges as may be required for the vehicles provided by UNICEF.

2.4 Public information in connection with the programme.

2.5 Incidental expenses necessary for the successful execution of the programme.

3. The Government will supply for the international personnel provided by WHO and UNICEF.

3.1 Office accommodation, furniture, equipment, stationery and secretarial assistance as required.

3.2 Transportation at the duty station and within the country while on duty, including transportation from the place of residence to the place of work, and return.

3.3 Assistance in obtaining suitable residential accommodation during the period of their official duties in the country.

3.4 Such other facilities as may be required for successful operation of the project.

4. <u>Reports from the Government</u>

The Government will keep WHO and UNICEF informed of the progress of the project. Such reports as required will be prepared periodically by the Government and submitted to the parties.

The appropriate WHO staff will assist the Government in the preparation of the reports mentioned herein.

...]

5. Publications

The Government and WHO and UNICEF will consult regarding the publication, both national and international, of findings and reports compiled in connection with the project.

6. Continuation of project

The Government will continue the programme within the scope of available resources after assistance from WHO and UNICEF has ended.

7. Evaluation Facilities

Evaluation facilities will be made available by the Government to WHO, UNICEF and other relevant UN agencies when necessary, including access to statistical and other records and assistance from statistical and other governmental services and use of their facilities.

8. Cost to Government

The estimated cost to the Government on carrying out its commitments in this project is 71.1 million Afghanis equivalent to $888,800

9. Third Party Liability

The Government shall be responsible for dealing with any claims which may be brought by third parties against WHO and UNICEF their advisers, agents, and employees, and shall hold harmless WHO and UNICEF, their advisers, agents and employees in case of any claims or liabilities resulting from operations under this agreement, except where it is agreed by the Government and WHO/UNICEF that such claims or liabilities arise from the gross negligence or wilful misconduct of such advisers, agents or employees.

PART X

Final Provision

1. This Plan of Operation will come into effect upon signature by the parties and will remain in effect until the international assistance provided, by WHO and UNICEF is withdrawn, including such period of time as may be necessary for winding up arrangements.

2. This Plan of Operation may be modified by mutual consent of the parties.

3. Upon termination of this project, supplies and equipment furnished under the PART VII of the Plan of Operations to which WHO and UNICEF have retained title shall be disposed of in accordance with the appropriate rules and policies and as mutually agreed between the Government and WHO and UNICEF.

...]

FOR THE GOVERNMENT OF THE REPUBLIC OF AFGHANISTAN

Signiture:

Name: M.N. Salehi

Title: President, Economic and Technical Cooperation Department, Ministry of Planning.

Place: Kabul

Date: 28 February 1974

FOR THE WORLD HEALTH ORGANIZATION

Signiture:

Name:

Title:

Place:

Date:

FOR THE UNITED NATIONS CHILDREN'S FUND

Signiture:

Name: S.A. Hoelgaard

Title: UNICEF Representative.

Place: Kabul

Date: 28 February 1974.

ANNEX 2

to the Plan of Operations for
Rural Water Supply Project
in Afghanistan

The purpose of this Annex is to record, in relation to Part VII (Commitments of UNICEF), that, in addition to the assistance listed in paragraphs I and 2 thereof, UNICEF will provide for a period of eighteen months, starting September 1974, the services of an internationally recruited hydrogeologist. The salary, allowances etc. for this expert will be financed by a special contribution of the Government of Switzerland.

This Annex is to be attached to, and forms an integral part of the Plan of Operations.

M.N. Salehi
President, Economic and Technical Cooperation Department
Ministry of Planning
For the Government of the Republic of Afghanistan

At Kabul, on
5 August 1974

Hashmat K. Gobar
UNICEF Representative a.i.
For the United Nations Children's Fund

At Kabul, on
5 August 1974

ANNEX 3

to the Plan of Operations for a

Rural Water Supply Project

in Afghanistan

The purpose of this Annex is to record, in relation to Part III (Area) and Part VII (Commitments of UNICEF), that:

- The Rural Water Supply Project is extended to the additional three provinces of Ghor, Badakhshan and Oruzgan;
- UNICEF will provide equipment, supplies and the services of a hydrogeologist for this extension,
- and the funds needed for the above mentioned 'noted' component of RWS project is being donated by the Government of Switzerland and amount to $275,180 for the operational years 1355 and 1356.

This Annex is to be attached to, and forms an integral part of the Plan of Operations.

At Kabul, on 27
October 1975

M.N. Salehi
President, Economic and Technical Cooperation, Department
Ministry of Planning
For the Government of the Republic of Afghanistan

(Signed)

At Kabul, on 27
October 1975

Svend Koelgaard
UNICEF Representative
for the United Nations Children's Fund

PART II

Introduction

The purpose of this Plan is to cover an expansion of the Environmental Sanitation Programme by introducing an intensive project of groundwater supply development in rural areas, necessitated by the effects of the drought conditions of 1970 and 1971 have had on the availability of groundwater for drinking and domestic purposes in the affected areas.

This programme has been developed in response to the drought emergency declaration issued by the Government in August 1971, and it is designed to accelerate efforts to deepening of existing dry wells and to sink new wells in drought affected areas.

The Government, recognizing the importance and the need for further development of its environmental health organization, intend to establish a Public Health Engineering Department, which in close collaboration with the Ground Water Department of the Ministry of Agriculture and Irrigation will provide groundwater for village communities as an essential component of the Environmental Sanitation Programme.

...]

PART III

Area

The area of operation of this project shall, to begin with, be limited to the twelve provinces which according to preparatory surveys are most seriously affected by the drought, and will at a later stage be extended to the whole country, and closely linked with the development of basic health services.

PART IV

Objectives

A. The general objective of this project is to assist as many rural communities as feasible in the areas which are critically affected by the drought emergency and which are also vulnerable to future drought conditions, in obtaining an adequate groundwater supply for the improvement of family living in these areas, and at the same time to strengthen the services involved in preparation for the long-term gradual development of a countrywide rural water supply programme.

B. The specific objectives are the following:

1. To develop effective field operations through inter-ministerial collaboration for the exploitation of water resources for human consumption and household use in rural areas where water scarcity is a major problem.

...]

2. To strengthen the environmental sanitation services in the country by supporting the new Public Health Engineering Department of the Ministry of Public Health in its efforts to cope with the need for intensive village water supply development; initially as an emergency operation and later as a long-term country programme.

3. To support the Ground Water Department of the Ministry of Agriculture and Irrigation in its collaborating role in the field of sinking deep wells for the project.

4. To encourage the provincial authorities concerned to collaborate in achieving the goals of the project and to ensure full co-operation by the woleswali level officials and other influential rural leaders.

5. To demonstrate the feasibility of developing water supplies for solving rural domestic water scarcity problems and thereby improving living conditions of families in rural environments.

6. To promote health consciousness of parents in rural areas with particular reference to water born diseases and related health hazards, causing extremely high mortality and morbidity in early childhood, and thereby instigate community action in the forms of participation in the construction of village water supply schemes and contribution to the operation and maintenance of them.

...]

7. To prepare planning information and material for long-term national water development plan including:

a) collection of data and information about groundwater resources;

b) gain practical experience in solving technical and operational problems related to national water supply operations;

c) obtain knowledge about the sociological and economic aspects of rural groundwater development;

d) evaluate the effect of introducing clean water to rural communities has on family life and in particular on the health conditions of young children.

8. To achieve the following targets:

Period	In Physical terms	In human terms
April 1973-end March 1974	336 wells	150,000 beneficiaries
April 1974-end March 1975	500 wells	300,000 beneficiaries
April 1975-end March 1976	500 wells	300,000 beneficiaries

(These targets are tentative, because the water scarcity areas have so far not been identified through sufficiently thorough surveying. The targets will be worked out each year and will be detailed in the annual plan of work which will be prepared for each year).

PART V

Plan of Action

1. ORGANIZATION

1.1 Government level

The Ministry of Public Health, having accepted full overall responsibility for rural community water supply development, has established close collaboration with the Ministry of Agriculture and irrigation. A protocol, signed by the parties on 29 February 1972, defines the division of work and the role of each of the participating ministries through their respective technical departments.

.....]

1.2 The role of the Ministry of Health

The technical department of the Ministry of Public Health, being the Public Health Engineering Department, will in relation to this project undertake the following:

a) surveying of the rural areas and determine which villages need water supply;

b) deepening of existing wells;

c) sinking of new shallow wells adequately lined;

d) testing the quality of the water and ensure its potability

e) covering the wells with adequate protective means,

f) installation and maintenance of pumps;

g) construction of water storage tanks and reticulation system.

1.2.1 At headquaters level, the new department will function through the following sections:

a) The planning and design section, which will be responsible for surveying and related analyses, design and specification of schemes, inspection and evaluation.

b) The water supply section, which will be responsible for the sinking of properly lined wells and installation of pumps, construction of reservoirs and related reticulation systems, and for the maintenance of pumps and equipment.

c) The sanitation section, which will continue the regular environmental health programme in the country, with particular emphasis on community water supply in the provinces included in the emergency phase of this project.

d) The administration section, which will be designed to apply special procedures in order to facilitate speedy and efficient field operations of the department.

...]

e) In addition, the Health Education Unit will be strengthened in order to expand its training activities, including the development of health education material, and supervise the local field sanitarians whose duties include health education in general and environmental sanitation motivation in particular.

1.2.2 The operations in the fields will be conducted at zonal, provincial and district level. The geographic pattern is the following:

I. <u>North-Eastern Zone:</u>

Includes : Takhar Province
Kunduz Province
Jawzjan Province

II. <u>East and Southern Zone:</u>

Includes : Nangarhar Province
Zabul Province
Kandahar Province

III. <u>North-Western Zone:</u>

Includes : Badghis Province
Faryab Province
Balkh Province

IV. <u>Western Zone:</u>

Includes : Herat Province
Farah Province
Nimroz Province

a) The work in each of the four zones will be conducted by a supervising engineer who will be responsible for the groundwater development programme in three provinces and mobile zonal drilling and construction units. Being the link between the Planning Section and the Water Supply Section at PHED headquarters and the field units, the supervisor will also be responsible for local surveying and drafting of the provincial emergency water development plans and the quarterly work schedule.

...]

b) At provincial level a senior sanitarian will be in charge of the provincial team which will include a mechanic, doing the work related to installation and maintenance of pumps, and a local unit, which includes a mason, a carpenter and local helpers, for production of concrete rings and cover slabs for the wells. He will also supervise the work of the woleswali (district) level teams of which there will be an average of four in each province.

c) At woleswali level the teams, comprising junior sanitarian, a mason and local helpers, who will work on deepening dry wells and digging new ones with hand tools, including augers.

1.2.3 The wells which cannot be completed by this hand method due to hard formations will be reported through the senior sanitarian to the zonal supervisor and they will be scheduled for completion by the zonal drilling and construction units, using light rigs and other mechanical means. This procedure applies also to the repairing of pumps which require facilities and competence beyond that which the provincial mechanic can offer.

1.2.4 The motivation unit will besides being involved in the training programme, provide community motivation support for the project where and when required.

...]

1.3 The role of the Ministry of Agriculture and Irrigation

The Ground Water Division of the Irrigation Department of the Ministry of Agriculture and Irrigation, is entrusted with the task of sinking deep wells and the installation of pumps in the areas where the water table is below the strata reachable by shallow wells. Ground Water Division is functioning through four sections, covering the fields of hydrology, geophysics, drilling and administration.

1.3.1 An additional section will be established to carry out the work related to this project, including groundwater surveying, deep well drilling and installation of pumps for the deep wells for which two complete drilling crews and necessary support services and supervision will be provided.

1.3.2 The UNOTC/UNDP assisted project for the establishment of a Water Management Department, initially being set up within the Ministry of Agriculture and Irrigation, will be closely associated with the project, and provide technical assistance as required.

2. OPERATIONAL STRATEGY

The emergency, calling for early and effective action to provide water fot the maximum number of families in as many of the seriously affected communities as possible, and at the same time to achieve a significant demonstration effect, necessitates a phased operational pattern.

...]

P L A N O F O P E R A T I O N S

FOR A

RURAL WATER SUPPLY PROJECT

IN AFGHANISTAN

